

# CLIMATE CHANGE LEGISLATION AND ITS SOCIO-LEGAL IMPLICATIONS FOR RURAL AGRICULTURE AND FOOD SECURITY IN INDIA: A REVIEW

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*The problem of climate change is now among the most pressing worldwide, and its negative effects are especially manifested in developing countries, where the rural economy depends directly on agriculture. The rising temperatures, inadequate precipitation, frequent droughts and floods have increased the rural vulnerability where livelihoods and food security have been threatened. India in its turn has come up with a number of climate change laws, environmental policies, policy institutions and adaptation programs aimed at promoting resilience of agriculture. This research paper examines the socio-legal environment of the Indian climate governance system and examines how it affects the rural agricultural and food security. It evaluates the major legislations like the Environment Protection Act and the Disaster Management Act and the programs like the National Action Plan on Climate Change (NAPCC), the National Mission for Sustainable Agriculture (NMSA), and various welfare programs. Despite a strong legislative framework, implementation, coordination and grassroots knowledge are still facing numerous challenges. The paper concludes by outlining recommendations on how to improve climate-responsive policy in order to secure the livelihoods of the rural population and ensure food security in the long term.*

## Introduction

Climate change has come to be one of the leading global issues with an impact on the developing countries like India whose economic backbone is agriculture in rural areas. Increasing temperatures, erratic rainfall, continuous drought and floods, and continuous degradation of the soil have increased rural vulnerability and endangered food security<sup>3</sup>. India, in turn, has formulated numerous policies, many laws, and institutional frameworks concerned with climate adaptation and mitigation.

In most rural parts of India, agriculture remains the main source of livelihood to the Indians<sup>4</sup>.

Climate variability has changed the modes of crop production, lowered production as well as strained already weak resources. Small and marginal farmers who in most cases lack adequate institutional support face the greatest risks<sup>1</sup>. Reduced yields, water scarcity and degradation of land have caused rural poverty, migration and food insecurity. India should improve legal governance to address climate issues as it tries to achieve the Sustainable Development Goals<sup>2</sup>. This paper evaluates the climate governance in India in terms of socio-legal factors and explores the implications of climate governance to rural agriculture and the food security in India<sup>5</sup>.

## Climate Change and Rural Agriculture in India

In India, the agricultural output is closely connected with the stability of the climate. About 60 per cent of arable land depends on rain which makes the rural life

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very dependent on monsoon<sup>6</sup>. In the recent climatic developments, a number of threats have been presented:

**a. Increasing Temperatures**

High temperatures reduce the productivity of major crops such as wheat, rice and legumes. High temperatures negatively affect the health of animals and milk production.

**b. Inconsistent Precipitation**

The unpredictable monsoons lead to frequent droughts and floods that alter the planting time, irrigation availability, and the content of soil moisture.

Severe Weather Phenomena Cyclones, flash floods, and prolonged droughts have heightened and destroyed the crops, preserved foodstuff, and rural infrastructure.

**c. Resource Deterioration**

The sustainability of agriculture is endangered by soil erosion, salinisation and depletion of groundwater. Too many chemicals also worsen the condition of soil.

**d. Socio-economic Susceptibility**

The agricultural failures are caused by climate and reduce the revenue and increase poverty. The effect is disproportionate on women, indigenous people, tenant farmers and landless labourers.

These changes have a systemic effect on food security, as they affect the availability, accessibility, stability, and use of food supply.

**Legal and Policy Framework on Climate Change in India**

The socio-legal response of India to climate change is an environmental law, climate efforts, agricultural schemes, and welfare programs aimed at improving resilience of rural population.

**a. Environment Protection Act of 1986 (EPA)**

The EPA offers the all-inclusive system of environmental regulation in India. Even though it does not solely operate in the agricultural sector, it allows the central government to monitor pollution, conserve natural resources, and detect ecologically sensitive areas, which play an important role in mitigating climate change<sup>7</sup>.

**b. National Action Plan on Climate Change (NAPCC).**

The NAPCC was started in 2008 and outlines eight climate missions. Key projects that have an effect on agriculture include:

NMSA fosters environmental-friendly methods such as water-efficient processes, and soil conservation, and sustainable agriculture that is climate-resilient<sup>8</sup>.

The National Water Mission takes the cause of improved water-use efficiency and optimised irrigation practices.

The National Solar Mission boosts the solar energy application in rural areas.

**c. Climate Change State Action Plans (SAPCC).**

Each state has come up with a climate action plan that considers the vulnerability of the region. The plans include crop diversification, water conservation, livelihood diversification, and seed resistant to climate changes. However, it is not uniformly applied between states.

**d. Disaster Management Act of 2005**

The act improves the ability of disaster preparation and response. Early warning systems, relief process, and restoration processes play the key role of ensuring the protection of the rural people against catastrophes caused by climate<sup>9</sup>.

**e. Forest Rights Act of 2006**

The Act recognizes the rights of forest dwelling people and promotes sustainable forest management which is fundamental in mitigation and stability of rural livelihoods.

**f. National Food Security Act, 2013**

This is not a climate law; however, it provides subsidized food grains to vulnerable households, which is an insurance against climatic-induced interruptions in agricultural production<sup>11</sup>.

**g. Major Agricultural Projects Related to Climate.**

Prime Minister Fasal Bima Yojana: climate damages agricultural insurance.

Soil Health Card Scheme: encourages fair fertilisers application.

PM-Kisan: subsidies on agriculturalists.

MGNREGA: develops climate resistant rural infrastructural facilities such as check dams, plantings and water harvesting systems.

All these measures give the basis of climate-adaptive agricultural governance in India<sup>10</sup>.

The Indian legal and regulatory framework has some positive and negative aspects to address climatic impacts on rural farming.

## Conclusion

India has some significant exposure to climate change affecting its rural production and food security. Although the country has a strong legislative and policy framework, it is ineffective due to gaps in implementation and social-economic inequality. The rural resilience would need to be strengthened by the effective institutional frameworks, by focusing on farmers and by heavily applying climate-smart farming methods. The rural livelihoods and long-term food security needs efficient climate-responsive legal governance to ensure safety in a more unstable environment. □

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